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EDITORIAL.—A new school of botanists is rapidly gaining ground in this country and we are glad to see it. While the country was new and its flora but little known it was very natural for systematic botany to be in the ascendency. It is a very attractive thing to most men to discover new species, but when the chance for such discovery becomes much lessened there is a turning to the inexhaustible field of physiological botany. Systematists are necessary, but a great number of them is not an essential thing and it is even better to have but a few entitled to rank as authorities in systematic work. But in studying the life histories of plants or their anatomical structure we can not have too many careful observers. This, at the present day, seems to be the most promising field and one botanist after another is coming to appreciate it. As microscopes are becoming cheaper and hence more common the workers in the histology of plants are becoming more numerous and it is to such that the GAZETTE would now address itself. It will be noticed that the notes published heretofore would largely come under the head of systematic botany, and it is our intention to continue to give large space to this subject, but we would like to take a stand in this new school and call for notes from its workers. Dr. Rothrock's paper on "Staining of Vegetable Tissues" was a start in the right direction and the eagerness with which such papers are now read is shown by the fact that that issue of the GAZETTE was entirely exhausted in filling orders. We expect to receive many notes pertaining to this branch of our science and if botanists who are interested in it will but come forward the GAZETTE will willingly open its pages to them. Let not only the results of study with the microscope be noted, but observations on the habits of plants, such as their fertilization, movements, absorption and evaporation of moisture, and the many other subjects which are now attracting so much attention. Let there not only be a record of such observations but expressions of opinion as to the best method of teaching how pupils can be made observers, and how far this can be profitably carried. Such topics would open up a new and large field to the GAZETTE and one that would be of interest to all botanists. That short notes upon the teaching of botany would be read with interest goes with the saying, when it is understood that nearly every other man upon our subscription list is a Professor of some kind or other, and that there is no college in the United States, where botany has any sort of prominence, where the GAZETTE is not taken.

VIOLA TRICOLOR, L. VAR. ARVENSIS, DC.—The plant of the United States, so named by Torrey and Gray, is *V. tenella* of Muhl-

enberg (Cat. 1813) and *V. bicolor* of Pursh (Fl. 1814), who evidently regarded it as native and for that reason, perhaps, a distinct species. Even if further comparison with European specimens should prove the determination of Torrey and Gray correct, its claims to a place in our indigenous flora seem to me very strong. In Pennsylvania it is widely diffused, but rare, yet abundant wherever found. It occurs in grassy meadows and on rocky slopes, remote from dwellings and never in cultivated grounds. Its entire behavior is that of a native, and hence unlike that of *V. tricolor* of the gardens, which, though it comes up from self-sown seeds, soon disappears, when not reinforced by fresh plantings, and shows no disposition to spread beyond culture. Mr. Reverchon, in the last number of the GAZETTE, reports it from Dallas county, Texas, and says: "I am satisfied it is native. I have met it in large patches in remote woods and prairies, sometimes *very far* from settlements" To this I may add the fact that it has also been collected in Colorado by Mr. Wm. A. Henry, who thus wrote me Aug. 29, 1876—"I send you more of the violet. It grows on a warm, dry slope at the mouth of Boulder Canon, in a rather inaccessible place. I have seen a few stalks further up the canon. It blooms very early, along with *Leucocrinum montanum*, so that it has probably escaped the notice of other collectors. I gathered it three years before in the same place. It *could* have been introduced, but I greatly doubt that seeds of recent introduction could have reached the spot where I found these plants."

I may here mention another addition to the flora of Colorado. Aubrey H. Smith, Esq., has kindly given me specimens of *Goodyera repens*, R. Br., collected by him on Pike's Peak, Aug. 1878.—THOS. C. PORTER.

LEPIDIDIUM CAMPESTRE, LINN.—Last September as I was just coming out of the hay fever, a farmer brought me a package of what he said was now becoming a troublesome weed. I instinctively smelled of the plant and brought back some decided symptoms of my malady. The weed proved to be *L. campestre*. As this has hitherto been a rare plant, it is of interest to know that with us it is no longer so. But this crucifer has struggled hard to attain its acclimatization. An adventurer from Europe, it came, as I believe, from Great Britain, where it was accustomed to a mild and humid climate, hence, though a great seed-bearer, ere it could become prolific of individuals it had to struggle through several generations of years in a climate involving extremes so opposite to the conditions of its native land.—S. LOCKWOOD, *Freehold, N. Jersey*.

ZOSTERA MARINA, L.—A. Engler, in a recent number of the *Botanische Zeitung*, has published some interesting observations concerning the "Eel grass," so common in the bays of our own coast. His observations relate chiefly to fertilization and growth. The following is an abstract of his paper from a late number of *Nature*.

At first the thread like stigma lies on the neighboring anther lobes,